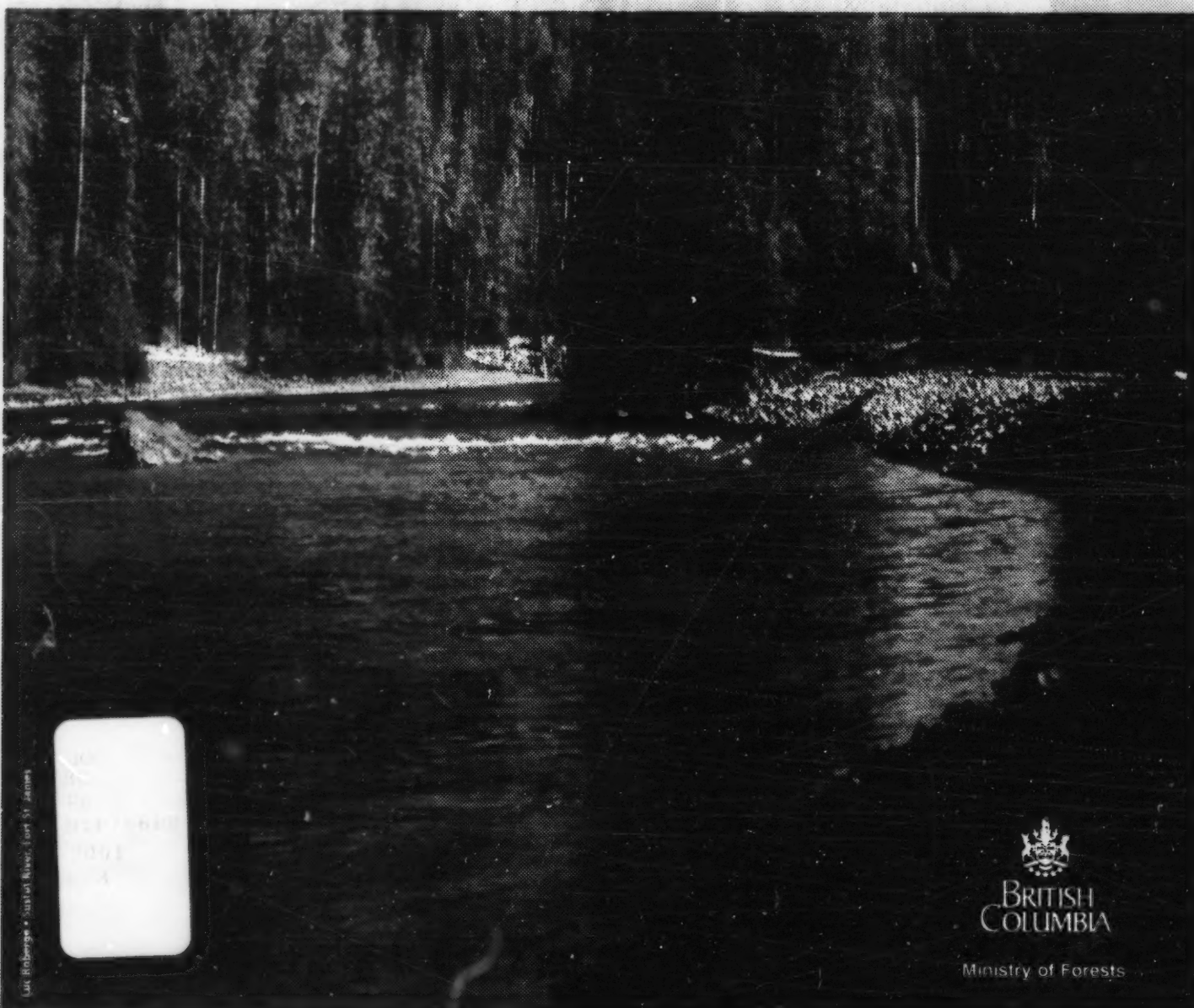




**Timber
Supply
Review**

Prince George Timber Supply Area

P u b l i c D i s c u s s i o n P a p e r



Lut. B. George • Sustained River, Fort St. James



**BRITISH
COLUMBIA**

Ministry of Forests



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Introduction

The British Columbia Forest Service reviews the timber supply^o for all timber supply areas^o (TSAs) and tree farm licences^o (TFLs) in the province at least once every five years. This review examines the impacts of current forest management practices on the timber supply, economy, environment and social conditions of the local area and the province. Based on this review, the chief forester will determine the allowable annual cut (AAC) for the Prince George TSA.

Inputs to the Timber Supply Review are:

Information about current forest management practices, economic, environmental and social factors, and public input.

Outputs are:

- A new AAC for the next five years
- A list of the information to be improved for future timber supply forecasts

Timber Supply Review in the Prince George TSA

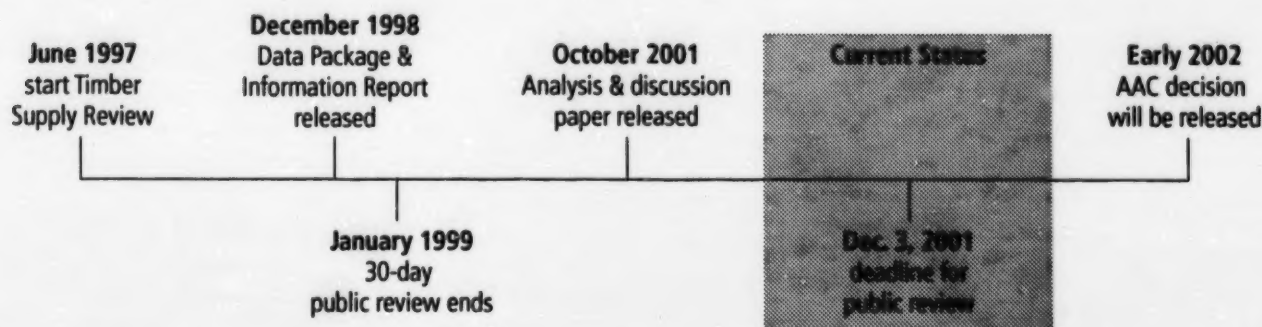
The British Columbia Forest Service has now completed the *2001 Prince George TSA Analysis Report*, which is summarized in this discussion paper. The objectives of this document are to provide British Columbians with an overview of the Timber Supply Review process (see steps below) and harvest level forecasts for the Prince George TSA, and to encourage them to provide comments during the 60-day public review period. **Public comments will be accepted until December 3, 2001.**

Before setting a new AAC, the chief forester will review all relevant reports and public input. The chief forester's determination will be outlined in a rationale statement that, along with the summary of public input, will be available to the public upon release. Following the release of the AAC determination by the chief forester, the minister of forests will apportion the AAC to the various licences and programs.

- * **Timber supply** – the amount of timber that is forecast to be available for harvesting over a specified time period, under a particular management regime.
- * **TSA** – an integrated resource management unit established in accordance with Section 7 of the Forest Act.
- * **TFL** – provides rights to harvest timber, and outlines responsibilities for forest management, in a particular area.

Review Process for the Prince George TSA

Figure 1. Steps in the timber supply review process for the Prince George TSA



* Timber harvesting land base – Crown forest land within the timber supply area where timber harvesting is considered both acceptable and economically feasible.

Description of the TSA

The Prince George TSA is located in the north-central interior of the province and is one of six TSAs in the Prince George Forest Region. The TSA covers about 7.5 million hectares and is administered by three districts: Prince George, Vanderhoof and Fort St. James. Within the boundaries of the three districts there are three tree farm licences (TFL 30, 42 and 53), as well as numerous parks, woodlots and private land.

The City of Prince George is the largest community in the TSA, others include Vanderhoof, Fort St. James, Hixon, Fraser Lake, Fort Fraser, Strathnaver, Giscome, Upper Fraser and Bear Lake. The population of the Prince George TSA was estimated to be about 109,285 in 2000, about a five-per cent increase since 1991.

First Nations

Fourteen First Nations groups comprise about six per cent of the Prince George TSA population. These include Nak'azdli, Takla Lake, Tl'azt'en, Cheslatta, Nadleh Whut'en, Stellat'en, Saik'uz, Lhoosk'uz Dene, Ulkatcho, Lheidli T'enneh, McLeod Lake, Dzitl'ainli, Yekooche and Nazko First Nations. In addition, the Gitksan,

Natoot'en, Kaska Dena, Tsay Keh Dene, Dzitl'ainli, Red Bluff and Tahltan First Nations have asserted traditional territories within the TSA.

Information from cultural heritage inventory studies, archaeological impact assessments and traditional-use surveys that have been completed will be considered in the upcoming allowable annual cut determination.

The natural resources

The forests of the Prince George TSA provide a wide range of forest land resources, including forest products (timber and non-timber, such as wild mushrooms), recreation and tourism amenities, and a variety of fishery and wildlife habitats.

The Forest Practices Code outlines a process for identifying species at risk that require special management. Currently, a number of species identified as at risk may be found in the Prince George TSA, including the Northern goshawk, Trumpeter swam, fisher, grizzly bear, and bull trout.

As Figure 2 shows, about 71 per cent of the Prince George TSA land base is considered productive Crown forest land managed by the British Columbia Forest Service (approximately 5.33 million hectares). Currently about 64 per cent of this is considered available for harvesting (timber harvesting* land base).

Environmental values

Current forest management follows the standards set out by the Forest Practices Code. These standards are designed to main-



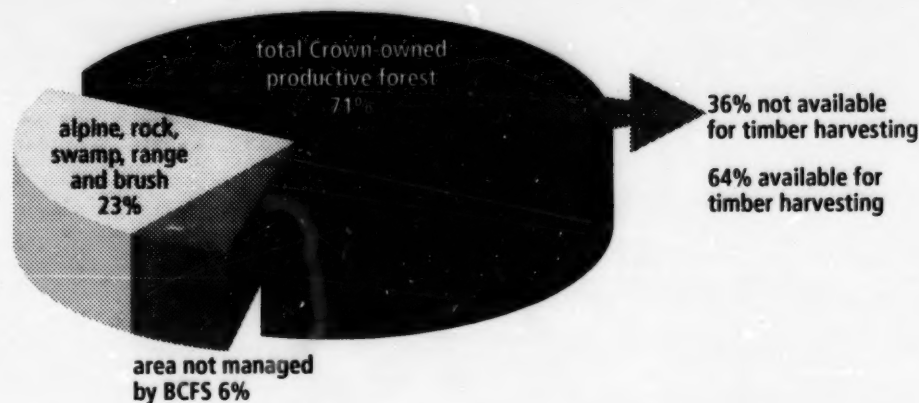


Figure 2. Breakdown of land base for Prince George TSA

tain a range of biodiversity, wildlife and other values. In the Prince George TSA, about 36 per cent of the productive Crown-owned forest land is not considered available for timber harvesting and will provide for many environmental values. Forested area both inside and outside the timber harvesting land base will help maintain critical forest habitats for many species. Forest cover requirements for biodiversity, scenic areas, community watersheds, recreation features, stream, lake and wetland management, and protection of unstable terrain were included in the analysis.

Land-use planning

In the TSA, there are three land and resource management planning (LRMP) processes, which cover the Prince George, Fort St. James and Vanderhoof forest districts, respectively.

The Prince George LRMP is currently in its second year of full implementation. A preliminary list of candidate objectives for higher-level plan designation has been developed. Implementation and monitoring of the Fort St. James

LRMP is well underway, and the Vanderhoof LRMP is now in its fifth year of implementation.

Land-use planning decisions that have received final approval from government will be reflected in this timber supply review. Since the last timber supply review, a number of new protected areas have been designated and are reflected in this timber supply review.

Current allowable annual cut

Following the last timber supply review, the chief forester set the allowable annual cut (AAC) for the Prince George TSA at 9,363,661 cubic metres, effective Feb. 1, 1996. Of this volume, the chief forester specified that 290,000 cubic metres are attributed to cedar and hemlock forests. The AAC is apportioned by the minister of forests to various licences.

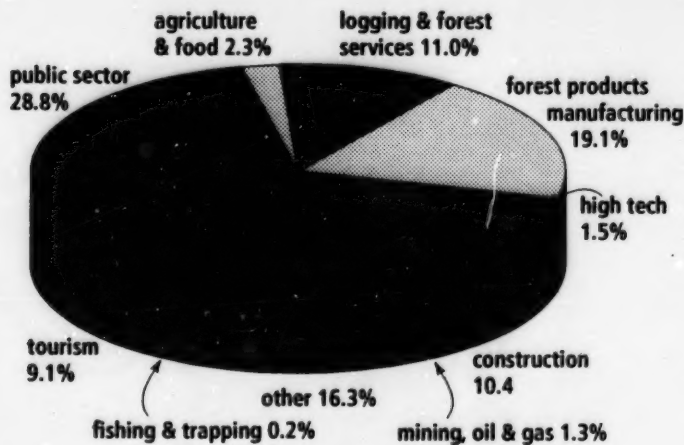


Figure 3. Prince George Forest District experienced labour force by sector, 1996.

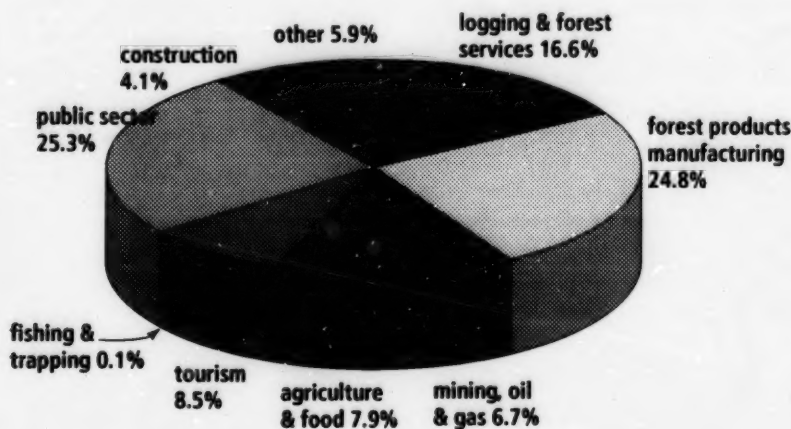


Figure 4. Vanderhoof Forest District experienced labour force by sector, 1996.

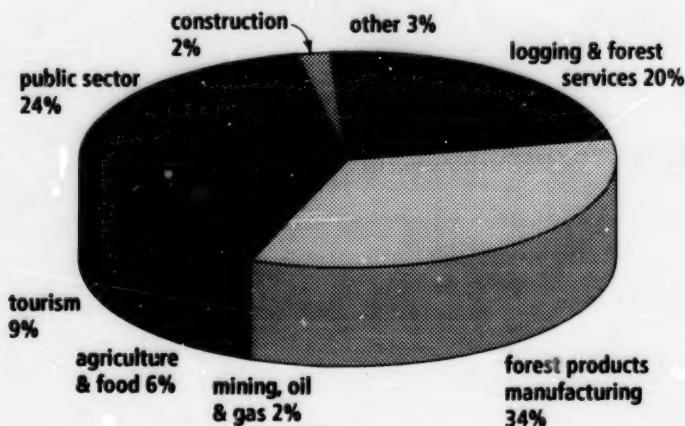


Figure 5. Fort St. James Forest District experienced labour force by sector, 1996.

Socio-economic profile

Regional economy

The forest industry in the Prince George TSA is an important source of employment and income for local residents. Other important sources include the public and tourism sectors.

In Vanderhoof and Fort St. James, the forest sector accounts for 41 per cent and 54 per cent of total employment, respectively, while in Prince George it accounts for approximately 30 per cent. In terms of income, the forest sector is the source of 29 per cent of the income within the Prince George area, and 43 per cent and 57 per cent of the income in Vanderhoof and Fort St. James, respectively.

The public sector is the second largest employer in Prince George, Vanderhoof and Fort St. James, accounting for 29 per cent, 25 per cent and 24 per cent of total employment, respectively. Employment in the travel sector, which includes business and tourism travel, employs about nine per cent of the total labour force in each of the forest districts.

From 1998 to 2000, an average of 10.8 million cubic metres of timber was processed at the 27 to 30 solid-wood mills located throughout the Prince George TSA. The three pulp mills in Prince George processed an average of 2.16 million bone dry units of wood chips, most of which were by-products of solid-wood mills within the TSA.

Table 1 illustrates the potential contribution of the forest industry associated with the Prince George TSA timber harvest to both the regional and provincial economies. Figures in this table are based on the average 1998-2000 annual harvest of about nine million cubic metres.

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Forest industry economic contribution

	TSA	Provincial
Direct employment (person years)	6,245	7,240
Total employment (person years)	11,040	16,200
Total employment income (\$1999 millions per year)	455.0	643.3
Provincial government revenues (\$1999 millions per year)	n.a.	473.3

Table 1. Summary of local and provincial economic information associated with the average 1998-2000 annual harvest—Arrowsmith TSA, 2001.

Timber supply forecasts

A timber supply computer model was used to project several possible timber supply forecasts for the next 250 years. The base case forecast illustrates the effect of current forest management practices on timber supply, using the best available information. The base case forecast is not a recommendation for an AAC, but rather it is one of many sources of information the chief forester will consider when setting the AAC.

The base case forecast for the Prince George TSA reflects the current AAC of 9.363 million cubic metres less 100,000 cubic metres for issued woodlots and 190,000 cubic metres cedar and hemlock. The base case forecast shows that a level of 9,073,660 cubic metres per year is possible for many decades.

The existing partition* for cedar and hemlock forests is 290,000 cubic metres per year; however, based on data gathered since the last determination the timber supply forecast is now 100,000 cubic metres per year for the next 50 years.

Compared to the 1995 timber supply analysis, several changes have occurred in the Prince George TSA that affect timber supply forecasts. The timber harvesting land base has decreased by 6.4 per cent, mostly to account for new protected areas, several highly-sensitive caribou habitat areas, treaty land and new woodlots.

Currently, mountain pine, spruce and Douglas-fir bark beetles are infesting forests in the TSA. At present, it is expected that only the mountain-pine-beetles are at levels that require increased harvest levels in response to the

* Partition—A portion of the AAC that is attributable to certain types of timber and/or terrain.

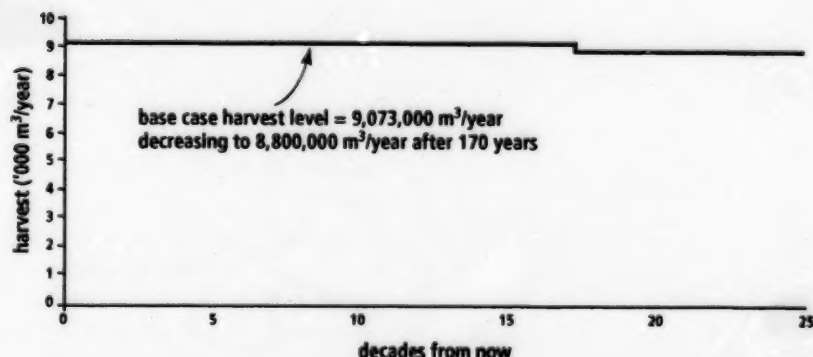


Figure 6. Base case forecast—Prince George TSA, 2001



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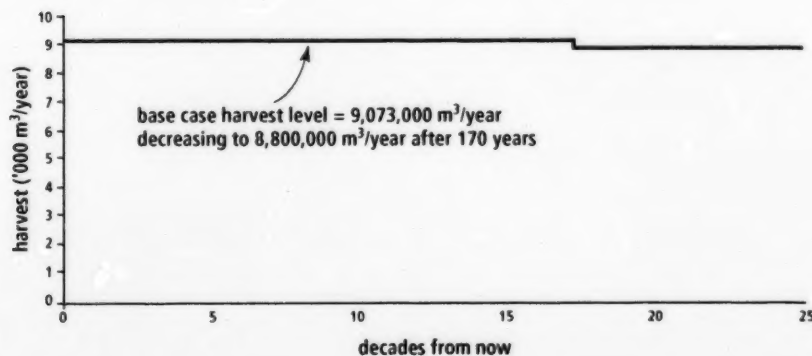


Figure 6. Base case forecast—Prince George TSA, 2001

infestation. This increased activity can likely be managed by redistributing the existing operations in the TSA to the infested stands.

Distribution of harvesting between the three districts has often been raised as a concern. The timber analysis shows that the Fort St. James, Prince George and Vanderhoof could provide a relatively steady contribution of 37 per cent, 41 per cent and 22 per cent, respectively. Over the past eight years, actual harvest levels have been about 32 per cent, 49 per cent and 19 per cent. This information will be considered by the chief forester prior to the AAC determination.

Sensitivity analyses: examining uncertainty

Because forests are complex and constantly changing, timber supply analysts assess how timber supply might be affected by uncertainties in inventory information and management practices. These uncertainties are generally examined through what are called sensitivity analyses, which the chief forester will consider in determining an AAC. The sensitivity analyses are useful for assessing how uncertainties and risks, or any changes in information, might

affect timber supply.

In the Prince George TSA, a number of sensitivity analyses were conducted to examine the stability of the timber supply light of uncertainties. Two key sensitivity analyses are described below. For a complete listing of sensitivity analyses, please refer to the 2001 Prince George TSA Analysis Report.

Uncertainty about the timber supply contribution from the northern portion of Fort St. James district

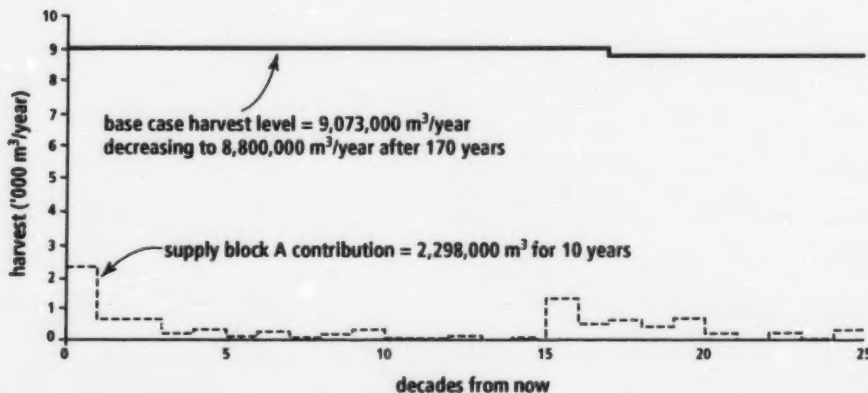
The northern portion of the Fort St James Forest District is called 'Supply Block A'. Currently, the only access to this area is by air or British Columbia Rail. This area covers about 175,000 hectares or five per cent of the timber harvesting land base.

Over the past years, there has been no agreement on how best to initiate development in this area. The figure below illustrates the importance of the timber supply in Supply Block A to the overall Prince George timber supply. The timber supply analysis shows that in the short term, the timber supply from this area contributes about 2.3 million cubic metres per year, and over the long term it contributes about 330,000 cubic metres per year.

Uncertainty of the estimated productivity of current old-growth sites after harvesting

The results of two provincial studies suggest that the future productivity of sites currently occupied by older forests may be underestimated. The research shows that the measured productivity of existing second-growth stands is higher than the productivity estimates using measurements from older forests

Figure 7. Timber supply contribution from Supply Block A, Prince George TSA, 2001



growing on ecologically similar sites. These results are based on the maximum potential site productivity that might be achieved under ideal conditions. However, in the field, regeneration and subsequent growth does not always occur under ideal conditions due to factors such as competition from brush or overstocking. Therefore, some forests may not reach the potential productivity suggested by research.

The results of these studies apply to forests older than 140 years, which make up 37 per cent of the timber harvesting land base in the Prince George TSA. While there are no local studies to verify the application of the results of the provincial studies to the Prince George timber supply area, the results of the sensitivity analysis indicate that the long-term harvest level could be as much as 15.6 per cent higher than the base case forecast.

Innovative Forestry Practices Agreements

In 2001, the licensees in the Vanderhoof Forest District obtained an innovative forestry practices agreement (IFPA) that covers portions of the Prince George TSA. A forestry plan is being developed that will outline the innovative forestry practices to be undertaken in the area covered by the agreement.

Once the forestry plan is approved, the holders may make a request to the Forest Service regional manager that the allowable annual cut associated with their licences be increased based on the innovative forestry practices. The agreement area is included in the timber harvesting land base, however the process for reviewing AACs for licences linked to the IFPA is not part of the Timber Supply Review process.

Implications of changes in the AAC

Community Implications

The implication of changes in the AAC for local communities is an important consideration in the Timber Supply Review. The current AAC of 9,363,661 cubic metres, if fully harvested and processed, can support about 7,500 person-years of direct forestry employment and a further 9,270 person-years of indirect and induced employment across the province. Residents of the Prince George TSA account for about 86 per cent of the direct employment. The employment income associated with this direct, indirect and induced employment is projected to be about \$665 million per year. The provincial government could collect about \$470 to \$490 million per year, depending on the level of harvest, in stumpage and related payments, other industry taxes and provincial income taxes.

Your input is needed

Establishing the AAC is an important decision that requires well-informed and thoughtful public input. Feedback is welcomed on any aspect of this discussion paper, the 2001 Prince George TSA Analysis Report and other issues related to the timber supply in the Prince George TSA. Forest Service staff would be pleased to answer questions or discuss concerns that would help you prepare your response. Please send your comments to one of the forest district managers at the addresses below. **Your comments will be accepted until Dec. 3, 2001.**

You may identify yourself on the response if you wish. If you do, you are reminded that responses will be subject to the Freedom of Information and Protection of Privacy Act and may be made public. If the responses are made public, personal identifiers will be removed before the responses are released.

A summary of public comments will be attached to the AAC rationale and will be available from the district office when the chief forester's AAC determination is announced.

For more information contact and/or mail your comments to:

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Background Information Regarding TSR

The Chief Forester's Responsibility

Determining the allowable annual cuts (AACs) for public forest lands in British Columbia is the responsibility of the province's chief forester. In this lengthy and complex process, the chief forester considers technical reports, analyses and public input, as well as government's social and economic objectives.

This responsibility is required by legislation in the Forest Act, Section 8. It states that the chief forester shall specifically consider the following factors:

1. The rate of timber production that may be sustained from the area, taking into account:

- the composition of the forest and its expected rate of growth
- the time that it will take the forest to become re-established
- silviculture treatments, including reforestation
- standards of timber utilization
- constraints on the amount of timber that may be produced due to use of the forest for other purposes.

2. The short- and long-term implications to the province of alternative rates of timber harvesting from the area.

3. The nature, production capabilities and timber requirements of established and proposed processing facilities.

4. The economic and social objectives of the Crown for the area, region and province—as expressed by the minister of forests.

5. Abnormal insect or disease infestations, and major salvage programs planned for the timber on the area.

Some of these factors can be measured and analyzed—others cannot. Ultimately, the chief forester's determination is an independent professional judgment based on the best available information. By law, the chief forester is independent of the political process, and is not directed by the minister of forests when determining AACs. In these determinations, the chief forester considers relevant information from all sources.